

## **ABSTRACT**

The present invention provides a 3D handwriting recognition system that allows users to freely write words or characters in a 3D space in a touchless manner, without requiring any physical medium such as a pad or a tablet. The users' handwriting input  
5 in a 3D space will be tracked by an input device of the system that generates corresponding 3D motion data and wirelessly transfers the 3D motion data to a recognition device of the system. The 3D motion data will be converted and then mapped onto a 2D plane to generate corresponding 2D images for handwriting recognition. In this way, the users' inputting will never be limited to any screen, pad or  
10 plane, and the users will have more flexibility and enjoyable writing experience.--